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EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,919

Applicant(s)

SUZUKI, KOBUN

Examiner

Hussein A. El-chanti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Response to Amendment

1. This action is responsive to amendment received on Jan. 23, 2006. Claims 1, 18, 19, 20, 21 and 43 were amended. Claims 1-43 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Carcerano et al., U.S. Patent No. 6,308,205 (referred to hereafter as Carcerano).

As to claim 1, Carcerano teaches an image forming apparatus supervisory system configured to supervise a plurality of image forming apparatuses disposed at a plurality of user sides, said image forming apparatus supervisory system comprising:

a central supervisory apparatus configured to include a processor and to determine updated hardware in an applicable one or more of the plurality of image forming apparatuses (see col. 4 lines 49-65, server connected to plurality of printers);

a plurality of communications adapters configured to connect to the central supervisory apparatus by a communication line; a plurality of interfaces configured to

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connect each of the plurality of image forming apparatuses with each of the plurality of communications adapters (see col. 4 lines 49-65);

a firmware download device provided in the central supervisory apparatus and configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with updated hardware of the one or more image forming apparatuses (see col. 14 lines 8-30); and

a firmware update device provided in each of the image forming apparatuses and configured to update firmware of the one or more image forming apparatuses with the updated firmware when the updated firmware is downloaded (see col. 14 lines 8-30).

As to claim 2, Carcerano teaches the image forming apparatus supervisory system according to claim 1, wherein the updated hardware includes a control baseboard or a unit (see col. 14 lines 8-30).

As to claim 3, Carcerano teaches the image forming apparatus supervisory system according to claim 1, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware (see col. 4 lines 49-65).

As to claim 4, Carcerano teaches the image forming apparatus supervisory system according to claim 1, further comprising:

a hardware read device configured to read hardware information of each of the plurality of image forming apparatuses (see col. 15 lines 22-62);

a hardware information transmission device configured to transmit the hardware information from the each of the plurality of image forming apparatuses to the central supervisory apparatus (see col. 15 lines 22-62);

a database provided in the central supervisory apparatus and configured to store hardware information of the plurality of image forming apparatuses (see col. 15 lines 22-62); and

a database update device configured to update the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses (see col. 15 lines 22-62).

As to claim 5, Carcerano teaches the image forming apparatus supervisory system according to claim 4, wherein said hardware information is transmitted when power is supplied to the image forming apparatus (see col. 15 lines 22-62).

As to claim 6, Carcerano teaches the image forming apparatus supervisory system according to claim 4, wherein said hardware information is periodically transmitted at a prescribed interval (see col. 13 lines 58-col. 14 lines 14).

As to claim 7, Carcerano teaches the image forming apparatus supervisory system according to claim 4, wherein said hardware information is transmitted when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus (see col. 15 lines 22-62).

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As to claim 8, Carcerano teaches the image forming apparatus supervisory system according to claim 4, further comprising: a hardware read instruction transmission device provided in the central supervisory system and configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is transmitted when the applicable one or more image forming apparatuses receives the hardware read instruction (see col. 15 lines 22-62).

As to claim 9, Carcerano teaches the image forming apparatus supervisory system according to claim 4, further comprising: a hardware information storage device provided in the each of the plurality of image forming apparatuses and configured to store its own hardware information; and a hardware information update device configured to update its own hardware information (see col. 15 lines 22-62).

As to claim 10, Carcerano teaches the image forming apparatus supervisory system according to claim 9, further comprising: a hardware read device provided in the hardware information update device and configured to read at least a version number of the hardware; an information comparison device configured to compare the at least a version number with the hardware information stored in the hardware information storage device; and a determination device configured to determine if the at least a version number conforms to the hardware information, wherein said hardware information update device updates its own hardware information with the at least a version number only when the at least a version number does conform to the hardware information (see col. 12 lines 6-col. 13 lines 30).

As to claim 11, Carcerano teaches the image forming apparatus supervisory system according to claim 9, wherein said hardware information is updated when power is supplied to the image forming apparatus (see col. 15 lines 22-62).

As to claim 12, Carcerano teaches the image forming apparatus supervisory system according to claim 9, wherein said hardware information is periodically updated at a prescribed interval (see col. 14 lines 8-30).

As to claim 13, Carcerano teaches the image forming apparatus supervisory system according to claim 9, wherein said hardware information is updated when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus (see col. 15 lines 22-62).

As to claim 14, Carcerano teaches the image forming apparatus supervisory system according to claim 11, further comprising: a hardware read instruction transmission device provided in the central supervisory system and configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is read and transmitted to the central supervisory system when the hardware information transmission device of the applicable one or more image forming apparatuses receives the hardware read instruction (see col. 15 lines 22-62).

As to claim 15, Carcerano teaches the image forming apparatus supervisory system according to claim 9, further comprising: a hardware read instruction transmission device provided in the central supervisory system and configured to

transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is updated when the hardware information update device receives the hardware read instruction from the central supervisory apparatus, and is then read and transmitted to the central supervisory apparatus by the hardware information transmission device (see col. 15 lines 22-62).

As to claim 16, Carcerano teaches the image forming apparatus supervisory system according to claim 14, further comprising: a conformity check device provided in the firmware download device configured to check conformity of supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware (see col. 14 lines 8-59).

As to claim 17, Carcerano teaches the image forming apparatus supervisory system according to claim 16, wherein said updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware (see col. 15 lines 22-62).

As to claim 18, Carcerano teaches a method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising the steps of: providing a central supervisory apparatus configured to include a processor; providing a communication line configured to connect to the central supervisory apparatus; providing a plurality of communications adapters configured to connect to the communication line; providing a plurality of interfaces configured to

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connect each of the plurality of image forming apparatuses with each of the plurality of communications adapters; providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses; transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses; reading hardware information from hardware of the applicable one or more image forming apparatuses when power is supplied thereto; comparing the read hardware information with previously stored hardware information stored in a memory; determining if both of the read and previously stored hardware information conforms with each other; updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other; reading the updated hardware information; transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction; updating the database when the transmitted hardware information is received; determining if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information; and downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware (see col. 14 lines 8-62 and col. 15 lines 22-62).

As to claim 19, Carcerano teaches a method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising the steps of: providing a central supervisory apparatus configured to include

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a processor; providing a communication line configured to connect to the central supervisory apparatus; providing a plurality of communications adapters configured to connect to the communication line; providing a plurality of interfaces configured to connect each of the plurality of image forming apparatuses with each of the plurality of communications adapters; providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses; transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses; periodically reading hardware information from hardware of the applicable one or more image forming apparatuses; comparing the read hardware information with previously stored hardware information stored in a memory; determining if both of the read and previously stored hardware information conforms with each other; updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other; reading the updated hardware information; transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction; updating the database when the transmitted hardware information is received; determining if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information; and downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware (see col. 14 lines 8-62 and col. 15 lines 22-62).

As to claim 20, Carcerano teaches a method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising the steps of: providing a central supervisory apparatus configured to include a processor; providing a communication line configured to connect to the central supervisory apparatus; providing a plurality of communications adapters configured to connect to the communication line; providing a plurality of interfaces configured to connect each of the plurality of image forming apparatuses with each of the plurality of communications adapters; providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses; transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses; reading hardware information from hardware of the applicable one or more image forming apparatuses when prescribed communications are performed between the applicable one or more image forming apparatuses and the central supervisory apparatus; comparing the read hardware information with previously stored hardware information stored in a memory; determining if both of the read and previously stored hardware information conform with each other; updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other; reading the updated hardware information; transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction; updating the database when the transmitted hardware information is received; determining if supervisory information stored in the database conforms to

prescribed updated firmware corresponding to the updated hardware information; downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information stored in the database conforms to the updated firmware (see col. 14 lines 8-62 and col. 15 lines 22-62).

As to claim 21, Carcerano teaches a central supervisory apparatus configured to include a processor and to remotely supervise a plurality of image forming apparatuses, a plurality of communications adapters configured to connect to the central supervisory apparatus by a communication line, and a plurality of interfaces configured to connect each of the plurality of image forming apparatuses with each of the plurality of communications adapters, said central supervisory apparatus comprising: a firmware download device configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with updated hardware of the one or more image forming apparatuses (see col. 14 lines 8-62 and col. 15 lines 22-62).

As to claim 22, Carcerano teaches the central supervisory apparatus according to claim 21, wherein the updated hardware includes a control baseboard unit (see col. 7 lines 1-67).

As to claim 23, Carcerano teaches the central supervisory apparatus according to claim 21, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware (see col. 7 lines 1-67).

As to claim 24, Carcerano teaches the central supervisory apparatuses according to claim 21, further comprising a firmware update device configured to update

firmware of the image forming apparatuses with the updated firmware when the updated firmware is downloaded (see col. 7 lines 1-67).

As to claim 25, Carcerano teaches the central supervisory apparatus according to claim 24, further comprising: a hardware read device configured to read hardware information thereof; and a hardware information transmission device configured to transmit the hardware information to the central supervisory apparatus (see col. 7 lines 1-67).

As to claim 26, Carcerano teaches the central supervisory apparatus according to claim 25, wherein said hardware information is transmitted therefrom to the central supervisory apparatus when power is supplied thereto (see col. 15 lines 22-62).

As to claim 27, Carcerano teaches the central supervisory apparatus according to claim 25, wherein said hardware information is periodically transmitted therefrom at a prescribed interval (see col. 14 lines 14-62).

As to claim 28, Carcerano teaches the central supervisory apparatus according to claim 25, wherein said hardware information is transmitted therefrom when prescribed communications are performed with the center system (see col. 14 lines 12-65).

As to claim 29, Carcerano teaches the central supervisory apparatus according to claim 21, further comprising: a database configured to store hardware information of the plurality of image forming apparatuses; and a database update device configured to update the database based upon the hardware information when receiving the

hardware information from the one or more image forming apparatuses (see col. 15 lines 22-67).

As to claim 30, Carcerano teaches the central supervisory apparatus according to claim 21, further comprising a hardware read instruction transmission device configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses (see col. 15 lines 22-67).

As to claim 31, Carcerano teaches the central supervisory apparatuses according of to claims 30, wherein said hardware information is transmitted therefrom when receiving the hardware read instruction (see col. 15 lines 22-67).

As to claim 32, Carcerano teaches the central supervisory apparatus according to claims 30, further comprising: a hardware information storage device configured to store hardware information related to the plurality of image forming apparatuses; and a hardware information update device configured to update the hardware information (see col. 15 lines 22-67).

As to claim 33, Carcerano teaches the central supervisory apparatus according to claim 25, further comprising: a hardware information storage device configured to store hardware information thereof; and a hardware information update device configured to update the hardware information (see col. 14 lines 22-67).

As to claim 34, Carcerano teaches the central supervisory apparatus according to claim 33, further comprising: a hardware read device provided in the hardware information update device and configured to read at least a version number of the

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hardware; an information comparison device configured to compare the at least a version number with the hardware information stored in the hardware information storage device; and a determination device configured to determine if the at least a version number conforms to the hardware information, wherein said hardware information update device updates its own hardware information with the at least a version number only when the at least a version number does conform to the hardware information (see col. 15 lines 22-67).

As to claim 35, Carcerano teaches the central supervisory apparatus according to claim 33, wherein said hardware information is updated when power is supplied to the image forming apparatus (see col. 15 lines 22-67).

As to claim 36, Carcerano teaches the central supervisory apparatus according to claim 33, wherein said hardware information is periodically updated at a prescribed interval (see col. 15 lines 22-67).

As to claim 37, Carcerano teaches the central supervisory apparatus according to claim 33, wherein said hardware information is updated when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus (see col. 15 lines 22-67 and col. 14 lines 8-59).

As to claim 38, Carcerano teaches the central supervisory apparatus according to claim 33, wherein said hardware information is read and transmitted to the central supervisory system when the hardware information transmission device of the image

forming apparatuses receives the hardware read instruction (see col. 15 lines 22-67 and col. 14 lines 8-59).

As to claim 39, Carcerano teaches the central supervisory apparatus according to claim 33, wherein the hardware information is updated by the hardware read instruction transmission device when the hardware read instruction is received from the central supervisory apparatus (see col. 15 lines 22-67 and col. 14 lines 8-59).

As to claim 40, Carcerano teaches the central supervisory apparatus according to claim 39, wherein the updated hardware information is transmitted to the central supervisory apparatus by the hardware information transmission device (see col. 15 lines 22-67).

As to claim 41, Carcerano teaches the central supervisory apparatus according to claim 29, further comprising: a conformity check device provided in the firmware download device configured to check conformity of supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware (see col. 14 lines 8-59).

As to claim 42, Carcerano teaches the central supervisory apparatus according to claim 41, wherein said updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware (see col. 14 lines 22-45).

As to claim 43, Carcerano teaches an image forming apparatus supervisory system configured to supervise image forming means disposed at a plurality of user sides for forming an image, said image forming apparatus supervisory system comprising: central supervisory means for remotely supervising image forming means and for determining updated hardware in an applicable one or more of the plurality of image forming apparatuses; communications means for connecting the image forming means with the central supervisory means by a communication line; interface means for connecting each of the image forming means with each of the communications means; firmware download means for downloading prescribed updated firmware to an applicable one or more image forming means in accordance with updated hardware of the applicable one or more image forming means, said firmware download means provided in the central supervisory means; and firmware update means for updating firmware of the one or more image forming means with the updated use firmware when the updated firmware is downloaded, said firmware update means being provided in each of the image forming means (see col. 15 lines 22-67 and col. 14 lines 8-59).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 21 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyand et al., U.S. Pat. No. 6,930,785 B1, in view of Selitrennikoff et al., U.S. Pat. No. 6,209,089 B1.

As to claim 1, Weyand et al. teach the invention substantially as claimed including a system comprising:

A central supervisory apparatus configured to include a processor (as is common in most printers, fax machines, and copiers; col. 1, lines 13-28);
a firmware download device provided in the central supervisory apparatus and configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with updated hardware of the one or more image forming apparatuses (col. 2, lines 16-43); and
a firmware update device provided in each of the image forming apparatuses and configured to update firmware of the one or more image forming apparatuses with the updated firmware when the updated firmware is downloaded (col. 2, lines 16-43).

Weyand et al. did not specifically teach that the central supervisory apparatus determine updated hardware in an applicable one or more of the plurality of image forming apparatuses and to download firmware in accordance with the determined updated hardware. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3,

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lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting system software for new hardware components enables Weyand's system to automatically install and support the software drivers for new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

As to claim 21, Weyand et al. teach the invention substantially as claimed including an apparatus comprising:

a firmware download device configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with updated hardware of the one or more image forming apparatuses (col. 2, lines 32-43).

Weyand et al. did not specifically teach that the a processor configured determine updated hardware in an applicable one or more of the plurality of image forming apparatuses and to download firmware in accordance with the determined updated hardware. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3, lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting system software for

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new hardware components enables Weyand's system to automatically install and support the software drivers for new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

As to claim 43, Weyand et al. teach the invention substantially as claimed including an apparatus, comprising:

central supervisory means for remotely supervise image forming means (col. 2, lines 32-43).

firmware download means for downloading prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with updated hardware of the one or more image forming means, said firmware download means provided in the central supervisory means (col. 2, lines 32-43); and
firmware update means device for updating firmware of the one or more image forming apparatuses with the updated firmware when the updated firmware is downloaded, said firmware update means being provided in each of the image forming means (col. 2, lines 32-43).

Weyand et al. did not specifically teach that the a processor configured determine updated hardware in an applicable one or more of the plurality of image forming apparatuses and to download firmware in accordance with the determined updated hardware. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3,

lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting system software for new hardware components enables Weyand's system to automatically install and support the software drivers for new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

Claims 2-9, 11-17, 22-33 and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyand et al., U.S. Pat. No. 6,930,785 B1, and Selitrennikoff et al., U.S. Pat. No. 6,209,089 B1, as applied to claims 1, 21 and 43 above, and further in view of Weinberger, et al. U.S. Pat. No. 6,009,284.

As to claim 2, Weyand et al. and Selitrennikoff et al. do not teach wherein the updated hardware includes a control baseboard unit or a unit. Weinberger et al. teach apparatus, wherein the updated hardware includes a control baseboard unit or a unit (inherent; fig. 1, 2, 3 and 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

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As to claim 3, Weyand et al. and Selitrennikoff et al. do not teach wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware. Weinberger et al. teach apparatus, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware (col. 6, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 4, Weyand et al. and Selitrennikoff et al. do not teach apparatus, further comprising: hardware read device to read hardware information; hardware information transmission device to transmit hardware information; database provided in the central supervisory apparatus and to store hardware information; and database update device to update database based upon the hardware information.

Weinberger et al. teach apparatus, further comprising: a hardware read device configured to read hardware information of each of the plurality of image forming apparatuses (inherent because of user interface and translator; item 60 and 6; fig. 1); a hardware information transmission device configured to transmit the hardware information from the each of the plurality of image forming apparatuses to the central supervisory apparatus (inherent; col. 3, line 52- col. 4, line 9; fig. 1); a database

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provided in the central supervisory apparatus and configured to store hardware information of the plurality of image forming apparatuses (col. 4, lines 3-9); and a database update device configured to update the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses (inherent; col. 13, lines 23-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 5 and 11, Weyand et al. and Selitrennikoff et al. do not teach wherein said hardware information is transmitted therefrom when power is supplied to the image forming apparatus. Weinberger et al. teach apparatus, wherein said hardware information is transmitted therefrom when power is supplied to the image forming apparatus (inherent; col. 3, line 52- col. 4, line 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 6 and 12, Weyand et al. and Selitrennikoff et al. do not teach wherein the hardware information is periodically transmitted at a prescribed interval. Weinberger et

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al. teach apparatus, wherein the hardware information is periodically transmitted at a prescribed interval (inherent; col. 7, lines 6-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 7 and 13, Weyand et al. and Selitrennikoff et al. do not teach wherein the hardware information is transmitted when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus. Weinberger et al. teach apparatus, wherein the hardware information is transmitted when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus (via translator, fig. 1; inherent because of user interface; item 60, fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 8, 14 and 15, Weyand et al. and Selitrennikoff et al. do not teach further comprising a hardware read instruction transmission device provided in the central

supervisory system and configured to transmit the hardware instruction to the applicable one or more image forming apparatuses, wherein said hardware information is transmitted when the applicable one or more image forming apparatuses receives the hardware read instruction. Weinberger et al. teach apparatus, further comprising a hardware read instruction transmission device provided in the central supervisory system and configured to transmit the hardware instruction to the applicable one or more image forming apparatuses, wherein said hardware information is transmitted when the applicable one or more image forming apparatuses receives the hardware read instruction (inherent because of user interface and translator; item 60 and 6; fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 9, Weyand et al. and Selitrennikoff et al. do not teach apparatus, comprising: a hardware information storage device provided in each of the plurality of image forming apparatuses and configured to store its own hardware information. Weinberger et al. teach apparatus, further comprising: a hardware information storage device (i.e. database) provided in each of the plurality of image forming apparatuses and configured to store its own hardware information (col. 4, lines 3-9); and a hardware information update device configured to update its own hardware information (inherent;

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col. 13, lines 23-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 16, Weyand et al. do not teach apparatus, comprising: a conformity check device provided in the firmware download device configured to check conformity of the supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware. Weinberger et al. teach apparatus, further comprising: a conformity check device provided in the firmware download device configured to check conformity of the supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware (because of interrupt driven; col. 7, lines 6-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

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As to claim 17, Weyand et al. and Selitrennikoff et al. do not teach apparatus, comprising: wherein the updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware. Weinberger et al. teach apparatus, wherein the updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware (since the translator periodically evaluates the condition of the copier; col. 7, lines 6-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 22, Weyand et al. and Selitrennikoff et al. do not teach wherein the updated hardware includes a control baseboard unit. Weinberger et al. teach apparatus, wherein the updated hardware includes a control baseboard unit (inherent; fig. 1, 2, 3 and 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

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As to claim 23, Weyand et al. and Selitrennikoff et al. do not teach wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware. Weinberger et al. teach apparatus, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware (col. 6, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 24, Weyand et al. and Selitrennikoff et al. do not teach a firmware update device configured to update firmware of the image forming apparatuses with the updated firmware when the updated firmware is downloaded. Weinberger et al. teach apparatus, further comprising a firmware update device configured to update firmware of the image forming apparatuses with the updated firmware when the updated firmware is downloaded (inherent; fig. 1, 2,3 and 4; col. 13, lines 23-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

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As to claim 25, Weyand et al. and Selitrennikoff et al. do not teach apparatus comprising: a hardware read device configured to read hardware information thereof and a hardware information transmission device configured to transmit the hardware information to the central supervisory apparatus. Weinberger et al. teach apparatus, further comprising: a hardware read device configured to read hardware information thereof (via translator; fig. 1); and a hardware information transmission device configured to transmit the hardware information to the central supervisory apparatus (inherent because of user interface; item 60, fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 26 and 35, Weyand et al. and Selitrennikoff et al. do not teach apparatus, wherein said hardware information is transmitted therefrom to the central supervisory apparatus when power is supplied thereto. Weinberger et al. teach apparatus, wherein said hardware information is transmitted therefrom to the central supervisory apparatus when power is supplied thereto (inherent; col. 3, line 52- col. 4, line 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

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As to claims 27 and 36, Weyand et al. and Selitrennikoff et al. do not teach apparatus, wherein the hardware information is periodically transmitted at a prescribed interval. Weinberger et al. teach apparatus, wherein the hardware information is periodically transmitted at a prescribed interval (inherent; col. 7, lines 6-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 28, 37 and 40, Weyand et al. and Selitrennikoff et al. do not teach wherein said hardware information is transmitted therefrom when prescribed communications are performed with the center system. Weinberger et al. teach apparatus, wherein said hardware information is transmitted therefrom when prescribed communications are performed with the center system (inherent; col. 3, line 52- col. 4, line 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 29, Weyand et al. and Selitrennikoff et al. do not teach apparatus, comprising: a database configured to store hardware information; and a database

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update device configured to update database based upon the hardware information.

Weinberger et al. teach apparatus, further comprising: a database configured to store hardware information of the plurality of image forming apparatuses (col. 4, lines 3-9); and a database update device configured to update the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses (inherent; col. 13, lines 23-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 30, Weyand et al. and Selitrennikoff et al. do not teach a hardware read instruction transmission device configured to transmit the hardware instruction to the applicable one or more image forming apparatuses. Weinberger et al. teach apparatus, further comprising a hardware read instruction transmission device configured to transmit the hardware instruction to the applicable one or more image forming apparatuses (inherent because of user interface and translator; item 60 and 6; fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 31 and 38, Weyand et al. and Selitrennikoff et al. do not teach wherein said hardware information is transmitted therefrom when receiving the hardware read instruction. Weinberger et al. teach apparatus, wherein said hardware information is transmitted therefrom when receiving the hardware read instruction (inherent; col. 3, line 52- col. 4, line 9; fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claims 32 and 39, Weyand et al. and Selitrennikoff et al. do not teach apparatus, comprising: a hardware information storage device (i.e. database) configured to store hardware information related to the plurality of image forming apparatuses; and a hardware information update device configured to update the hardware information. Weinberger et al. teach apparatus, further comprising: a hardware information storage device (i.e. database) configured to store hardware information related to the plurality of image forming apparatuses (col. 4, lines 3-9); and a hardware information update device configured to update the hardware information (inherent; col. 13, lines 23-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in

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real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 33, Weyand et al. and Selitrennikoff et al. do not teach apparatus, comprising: a hardware information storage device configured to store hardware information thereof; and a hardware information update device configured to update the hardware information. Weinberger et al. teach apparatus, further comprising: a hardware information storage device (i.e. database) configured to store hardware information thereof (col. 4, lines 3-9); and a hardware information update device configured to update the hardware information (inherent; col. 13, lines 23-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 41, Weyand et al. and Selitrennikoff et al. do not teach a conformity check device provided in the firmware download device configured to check conformity of the supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware.

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Weinberger et al. teach apparatus, further comprising: a conformity check device provided in the firmware download device configured to check conformity of the supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware (because of interrupt driven; col. 7, lines 6-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

As to claim 42, Weyand et al. and Selitrennikoff et al. do not teach apparatus, wherein the updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware. Weinberger et al. teach apparatus, wherein the updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware (since the translator periodically evaluates the condition of the copier; col. 7, lines 6-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weyand et al., Selitrennikoff et al. and Weinberger et al. because that would provide automatic monitoring of copier status, in real time or quasi real time including error conditions, from a central location (col. 2, lines 2-4).

Claims 10 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyand et al., Selitrennikoff et al. and Weinberger et al. as applied to claims 9 and 33 above, and further in view of Kikuchi et al. U.S. Pat. No. 5,552,901.

As to claim 10, Weyand et al., Selitrennikoff et al. and Weinberger et al. do not teach a version number of the hardware, hardware information stored in the hardware information storage device and update when the at least a version number does conform to the hardware information. Kikuchi et al. teach a version number of the hardware (i.e. telephone number and user identifiers), hardware information stored in the hardware information storage device (in the address) and update when the at least a version number does conform to the hardware information (col. 6, lines 8-55).

However, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Weyand et al., Selitrennikoff et al. and Weinberger et al. with Kikuchi et al. because that would provide parallel runs of business applications (col. 3, lines 51-63).

As to claim 34, Weyand et al., Selitrennikoff et al. and Weinberger et al. do not teach a version number of the hardware, hardware information stored in the hardware information storage device and update when the at least a version number does conform to the hardware information. Kikuchi et al. teach a version number of the hardware (i.e. telephone number and user identifiers), hardware information stored in

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the hardware information storage device (in the address) and update when the at least a version number does conform to the hardware information (col. 6, lines 8-55).

However, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Weyand et al., Selitrennikoff et al. and Weinberger et al. with Kikuchi et al. because that would provide parallel runs of business applications (col. 3, lines 51-63).

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Weinberger et al. U.S. Pat. No. 6,009,284 in view of Kikuchi et al. U.S. Pat. No. 5,552,901, Weyand et al. U.S. Pat. No. 6,930,785 B1 and Selitrennikoff et al., U.S. Pat. No. 6,209,089 B1.

As to claim 18, Weinberger et al. teach the invention substantially as claimed including a method, comprising the steps of:

- providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses (col. 4, lines 3-9);
- transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses (items 60 and 6, fig. 1);
- reading hardware information from hardware of the applicable one or more image forming apparatuses when power is supplied thereto (col. 3, line 52-col. 4, line 9);
- comparing the read hardware information with previously stored hardware information stored in a memory (col. 7, lines 6-26);

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determining if both of the read and previously stored hardware information conforms with each other (col. 7, lines 6-26);
updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other (inherent; col. 13, lines 23-48);
reading the updated hardware information (inherent; item 60 and 6, fig. 1);
transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction (fig. 1);
updating the database when the transmitted hardware information is received (fig. 1; col. 13, lines 23-48);
determining if supervisory information stored in the database conforms to prescribed updated firmware (col. 7, lines 6-26); and
(inherent; fig. 1, 2, 3 and 4; col. 13, lines 23-48).

However, Weinberger et al. do not teach a central supervisory apparatus configured to include a processor and a communication line. Kikuchi et al. teach a central supervisory apparatus configured to include a processor and a communication line (inherent). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weinberger et al. and Kikuchi et al. because that would provide parallel runs of other business applications (col. 2, lines 59-62).

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Neither Weinberger et al. nor Kikuchi et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Weyand et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Weinberger et al. and Kikuchi et al. with Weyand et al. because that would provide upgrade information is selectively installed into the firmware of the imaging system (col. 2, lines 41-43).

Weinberger et al., Kikuchi et al. and Weyand et al. did not specifically teach to update the database when the transmitted updated hardware information is received and determine if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3, lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weinberger et al., Kikuchi et al. and Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting system software for new hardware components enables Weinberger et al., Kikuchi et al. and Weyand et al.'s system to automatically install and support the software drivers for

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new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

As to claim 19, Weinberger et al. teach the invention substantially as claimed including a method, comprising the steps of:

- providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses (col. 4, lines 3-9);
- transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses (items 60 and 6, fig. 1);
- periodically reading hardware information from hardware of the applicable one or more image forming apparatuses (col. 7, lines 6-26; col. 3, line 52-col. 4, line 9);
- comparing the read hardware information with previously stored hardware information stored in a memory (col. 7, lines 6-26);
- determining if both of the read and previously stored hardware information conforms with each other (col. 7, lines 6-26);
- updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other (inherent; col. 13, lines 23-48);
- reading the updated hardware information (inherent; item 60 and 6, fig. 1);
- transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction (fig. 1);

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updating the database when the transmitted hardware information is received (fig. 1; col. 13, lines 23-48);

determining if supervisory information stored in the database conforms to prescribed updated firmware (col. 7, lines 6-26).

Weinberger et al. do not teach a central supervisory apparatus configured to include a processor and a communication line. Kikuchi et al. teach a central supervisory apparatus configured to include a processor and a communication line (inherent)). However, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weinberger et al. and Kikuchi et al. because that would provide parallel runs of other business applications (col. 2, lines 59-62).

However, neither Weinberger et al. nor Kikuchi et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Weyand et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Weinberger et al. and Kikuchi et al. with Weyand et al. because that would provide upgrade information is selectively installed into the firmware of the imaging system (col. 2, lines 41-43).

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Weinberger et al., Kikuchi et al. and Weyand et al. did not specifically teach to update the database when the transmitted updated hardware information is received and determine if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3, lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weinberger et al., Kikuchi et al. and Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting system software for new hardware components enables Weinberger et al., Kikuchi et al. and Weyand et al.'s system to automatically install and support the software drivers for new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

As to claim 20, Weinberger et al. teach the invention substantially as claimed including a method, comprising the steps of:

- providing a database configured to store and supervise hardware information of the plurality of image forming apparatuses (col. 4, lines 3-9);
- transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses (items 60 and 6, fig. 1);
- reading hardware information from hardware of the applicable one or more image forming apparatuses when prescribed communications are performed between

the applicable one or more image forming apparatuses and the central supervisory apparatus (col. 7, lines 6-26; col. 3, line 52-col. 4, line 9);
comparing the read hardware information with previously stored hardware information stored in a memory (col. 7, lines 6-26);
determining if both of the read and previously stored hardware information conforms with each other (col. 7, lines 6-26);
updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other (inherent; col. 13, lines 23-48);
reading the updated hardware information (inherent; item 60 and 6, fig. 1);
transmitting the updated hardware information to central supervisory apparatus when receiving the hardware read instruction (fig. 1);
updating the database when the transmitted hardware information is received (fig. 1; col. 13, lines 23-48);
determining if supervisory information stored in the database conforms to prescribed updated firmware (col. 7, lines 6-26).

Weinberger et al. do not teach a central supervisory apparatus configured to include a processor and a communication line. Kikuchi et al. teach a central supervisory apparatus configured to include a processor and a communication line (inherent) (fig. 4, 16 and 17). However, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Weinberger et al. and Kikuchi et al.

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because that would provide parallel runs of other business applications (col. 2, lines 59-62).

However, neither Weinberger et al. nor Kikuchi et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Weyand et al. teach downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Weinberger et al. and Kikuchi et al. with Weyand et al. because that would provide upgrade information is selectively installed into the firmware of the imaging system (col. 2, lines 41-43).

Weinberger et al., Kikuchi et al. and Weyand et al. did not specifically teach to update the database when the transmitted updated hardware information is received and determine if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information. Selitrennikoff et al. teach to detect new hardware and to locate device drivers that support the new hardware for download (abstract, col.2, lines 58-63, col.3, lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Weinberger et al., Kikuchi et al. and Weyand et al. and Selitrennikoff et al. because Selitrennikoff et al.'s teaching of automatically adjusting

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system software for new hardware components enables Weinberger et al., Kikuchi et al. and Weyand et al.'s system to automatically install and support the software drivers for new hardware in the system without much administrator attention (see Selitrennikoff et al., col.2, lines 32-47).

Response to Arguments

3. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection.
4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein Elchanti

June 9, 2006


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